



Europäisches Patentamt

(19)

European Patent Office

(11) Publication number:

0 217 659

Office européen des brevets

A3

(2)

## EUROPEAN PATENT APPLICATION

(21) Application number: 86307458.9

(51) Int. Cl.4: G01N 33/84 , G01N 33/68 ,  
G01N 33/70

(22) Date of filing: 29.09.86

(30) Priority: 27.09.85 US 780739

(71) Applicant: Eastern Virginia Medical Authority  
700 Olney Road  
Norfolk Virginia 23507(US)

(43) Date of publication of application:  
08.04.87 Bulletin 87/15

(72) Inventor: Hodgen, Gary D.  
619 Mowbray Arch  
Norfolk Virginia 23507(US)

(84) Designated Contracting States:  
AT BE CH DE FR GB IT LI LU NL SE

(74) Representative: Sheard, Andrew Gregory et al  
Kilburn & Strode 30, John Street  
London WC1N 2DD(GB)

(54) Date of deferred publication of the search report:  
30.03.88 Bulletin 88/13

(52) Predicting predisposition to osteoporosis.

(57) Means are provided for use in a method of providing a diagnostic indicia which is predictive of the risk of a non-osteoporotic human being contracting osteoporosis as a consequence of being in a long-term hormonally agonadal state, which comprises the steps of determining the average ratio of calcium to creatinine in the urine or in the blood of that person, during a period when the person is ingesting only foodstuff sources of calcium and vitamin D, while in a hormonally gonadal state, and also while in a hormonally agonadal state; determining the magnitude of the difference in the ratio obtained in the latter state compared to the former state, a large difference being predictive of a high risk of that person contracting osteoporosis.

EP 0 217 659 A3



EP 86 30 7458

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	DATABASE PASCAL, vol. 33, no. 6, reference 82289550, 1981, pages 575-581; C. CHRISTIANSEN et al.: "Factors in response to treatment of early postmenopausal bone loss", & CALCIF. TISSUE INT. 1981, 33(6) ---	1,7	G 01 N 33/84 G 01 N 33/68 G 01 N 33/70
X	CHEMICAL ABSTRACTS, vol. 96, no. 3, 18th January 1982, page 189, column 2, abstract no. 16923w; Columbus, Ohio, US; J.L. SEBERT et al.: "Fasting urinary excretion of calcium, phosphate and hydroxyproline in relation to creatinine. Normal values and correlations with 24-hour urine values", & NOUV. PRESSE MED. 1981, 10(34), 2799-2801 ---	1	
P, X	CHEMICAL ABSTRACTS, vol. 105, no. 1, 7th July 1986, page 525, column 2, abstract no. 5477g, Columbus, Ohio, US; E.C.H. VAN BERESTEYN et al.: "Design and data quality of a mixed longitudinal study to elucidate the role of dietary calcium and phosphorus on bone mineralization in pre-, peri-, and postmenopausal women", & AM. J. CLIN. NUTR. 1986, 43(4) 538-548 ---	1,7	
L, X	CHEMICAL ABSTRACTS, vol. 107, no. 19, 9th November 1987, page 521, column 1, abstract no. 173687k, Columbus, Ohio, US; R. LI et al.: "Relationship of fasting urine calcium to estrogen level in postmenopausal women", & ZHONGHUA FUCHANKE ZAZHI (BEIJING) 1986, 21(6), 346-348 ---	1,7	
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
BERLIN	02-12-1987	GREEN C.H.	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
Y : particularly relevant if combined with another document of the same category	E : earlier patent document, but published on, or after the filing date		
A : technological background	D : document cited in the application		
O : non-written disclosure	L : document cited for other reasons		
P : intermediate document	& : member of the same patent family, corresponding document		



DOCUMENTS CONSIDERED TO BE RELEVANT									
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)						
A	CHEMICAL ABSTRACTS, vol. 95, no. 7, 17th August 1981, page 559, columns 1, 2, abstract no. 60283r, Columbus, Ohio, US; G. SCHAAFSMA "The influence of dietary calcium and phosphorus on bone metabolism", & NIZO-VERSL. 1981, 219, 120 ---	1,7							
A	US-A-3 771 961 (J.W. DENNEY) * column 1, lines 1-32; claim 1 * ---	1,7							
A	EP-A-0 067 041 (WAKO PURE CHEMICAL INDUSTRIES LTD.) * page 1 complete, claim 1 * ---	1,7							
A	CLINICAL CHENISTRY, vol. 26, no. 8, July 1980, pages 1119-1126, Winston-Salem, US; S. NARAYANAN et al: "Creatinine: A review" * pages 1119-1126 * -----	1,7							
TECHNICAL FIELDS SEARCHED (Int. Cl.4)									
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>BERLIN</td> <td>02-12-1987</td> <td>GREEN C.H.</td> </tr> </table>				Place of search	Date of completion of the search	Examiner	BERLIN	02-12-1987	GREEN C.H.
Place of search	Date of completion of the search	Examiner							
BERLIN	02-12-1987	GREEN C.H.							
CATEGORY OF CITED DOCUMENTS		<p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or  after the filing date  D : document cited in the application  L : document cited for other reasons  -----  &amp; : member of the same patent family, corresponding  document</p>							
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document									

**THIS PAGE BLANK (USPTO)**